**Stat & Data Analysis Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**10.1 part 2 Classwork Chi-Square test for Association**

1. A researcher wishes to know whether there is a relationship between political philosophy and preferred news program among residents of a particular city who regularly watch the national news. A random sample of 300 regular watchers is selected.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Network News | | | |  |
| Politics | ABC | CBS | NBC | PBS | total |
| Liberal | 20 | 20 | 25 | 15 | 80 |
| Moderate | 45 | 35 | 50 | 20 | 150 |
| Conservative | 15 | 40 | 10 | 5 | 70 |
| total | 80 | 95 | 85 | 40 | 300 |

1. What percent of the TV watchers were Liberal **and** watch NBC?
2. What percent **of those that watch CBS** are Moderate?
3. What percent **of Conservatives** watch ABC?
4. What percent of TV viewers were Moderates?
5. Run a test of significance to see if there is an association between political philosophy and preferred news program.
6. A random survey of cars parked in the lot at a local university is classified by country of origin (country it is made in) and owner (student or staff). The results are in the table below. Is there a relationship between country of origin and owner?

|  |  |  |
| --- | --- | --- |
|  | **Student** | **Staff** |
| **American** | 107 | 105 |
| **European** | 33 | 12 |
| **Asian** | 55 | 47 |